

DOCUMENTATION ON BMI CALCULATOR APP for hackathon

**SUBMITTED BY-**

TEAM ctrl coders

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**Problem Statement**- To calculate Body Mass Index (BMI) using Height and Weight entered by the user.

Body mass index (BMI) is a measure of body fat based on height and weight that applies to adult men and women. It is a tool used to compute one’s BMI. All one has to do is to:

• Enter your weight and height using standard measures.

• Select "Calculate BMI" and your BMI will appear below.

**Requirements:**

* Software Requirement: Android Studio, Microsoft Windows 7/8/10(32 or 64 bit), 1GB for Android SDK.
* Hardware Requirement: 2GB (4GB recommended),500MB Disk Space

For processing power Intel Core i3 clocked at nearly 2GHZ is enough to handle most normal Android applications.

**Technologies used:**

* Flutter: Flutter is an open-source UI development SDK managed by google. It is powered by Dart programming language. It builds performant and good-looking natively compiled applications for mobile (Ios, Android), web, and desktop from a single code base. The key selling point of flutter is flat development is made easier, expressive, and flexible UI and native performance.
* FRONTEND- The frontend language that we have used here is Dart in Flutter. Flutter is framework specifically designed for the frontend.
* BACKEND- As such there is no default backend for a Flutter application.

**Project Description**: The design of this application is inspired by something we came across on Dribbble. We have used flutter themes to make our application colorful and attractive. Firstly we created a material page on app and then we moved on to creating columns and containers and also installed flutter packages like icons and sliders to define the content of our application. We then used button widget to select the values. This pretty much sums up our first screen.

In our second screen we show the result or the output BMI. Here again we make column, container and many other things. We have used navigation so that our page moves from one screen to another.

BMI Categories:

Underweight = <18.5

Normal weight = 18.5–24.9

Overweight = 25–29.9

Obesity = BMI of 30 or greater

According to the above categories, the users will get a respective message on their screens about their health condition. It also motivates the users to take actions towards a healthy and better lifestyle.

It is an inexpensive and easy to perform method of screening for weight categories that may lead to health problems.

**Scope:**

* Function- To find out BMI we will take input from the user (both height and weight) which will be stored in height and weight variable for further calculation. The calculation process is simple, we will simply divide weight in kilograms by the square of the height. Now as per the BMI calculated, it will execute the respective if-else statement.
* Features- We have used flutter\_icons plugin to pubspec.yaml to add icons in our app. Our app has the default white color and we can change the theme to black by changing the themeData parameter of MaterialApp to ThemeData.dark(). We have used the command import ‘package:flutter/material.dart’; to build the widget which will build the containers. We have wrapped our widget inside the GestureDecetor widget which looks for different sorts of actions that can be performed on the screen such as click, double click or long-press etc.

We have added our slider along with header saying HEIGHT along with ‘cm’ bottom of this will be having slider.

**Challenges faced:** The one major problem that we faced while creating this app was to run Android Studio on our PC (4GB RAM). Android Studio needs at least 8GB RAM to run better. The Loading/Compiling/Designing/Writing time gets reduced even in 4GB RAM because it is a very heavy software and needs to access multiple files repeatedly.

**Conclusion:**  In conclusion, this BMI calculator will give a lot of benefits which consists quick relation between weight and height. This system is simple and will make people’s life easier as it saves both, cost and time. It is of great use for us students. Students do not have much time to exercise, thus with the help of this app students will be able to plan their activities and maintain a healthy lifestyle. We really hope that this app turns out to be useful for people.